

## **DATA STORAGE AND RETRIEVAL SYSTEM**

### **Abstract**

Embodiments of the present invention provide a data storage and retrieval system operating on a host computer. The data storage and retrieval system comprises a sparing system configured to replace defective memory sections of a memory device with replacement memory sections of the memory device, and an error correction code system. The error correction code system is configured to encode data with an error correction code to store the data into the memory device and decode the encoded data with the error correction code to retrieve the data from the memory device.